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AN INVESTIGATION OF THE EFFECT OF AN ENRICHED BASIC LIBERAL ARTS PROGRAM ON THE EDUCATIONAL DEVELOPMENT OF THE JUNIOR COLLEGE LIBERAL ARTS TRANSFER STUDENT.

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A DEMONSTRATION AND EVALUATION OF ONE MEANS OF MEETING THE NEEDS OF AVERAGE AND LOWER ABILITY STUDENTS WAS CONDUCTED AT MARYMOUNT COLLEGE. THE PROGRAM WAS AN ENRICHED LIBERAL ARTS CURRICULUM. STUDENTS WERE GROUPED ON THE BASIS OF EXPOSURE TO THE ENRICHED PROGRAM AND COMPARED WITH A GROUP NOT EXPOSED TO SUCH A PROGRAM. COMPARISONS WERE MADE ON--(1) CHANGES ON "SEQUENTIAL TESTS OF EDUCATIONAL PROGRESS" TEST SCORES FROM ENTRANCE TO GRADUATION IN MATHEMATICS, SCIENCE, READING, SOCIAL STUDIES, AND WRITING, (2) DROPOUT RATE, (3) INCIDENCE OF TRANSFER TO A 4-YEAR INSTITUTION OF HIGHER LEARNING, (4) PERFORMANCE AT THE 4-YEAR INSTITUTION, AND (5) PERSISTENCE AT THE TRANSFER INSTITUTION THROUGH THE JUNIOR YEAR. THE INVESTIGATORS CONCLUDED THAT THE ENRICHMENT PROGRAM AT MARYMOUNT COLLEGE MIGHT BE CREDITED WITH INCREASED STUDENT PERSISTENCE AS DEMONSTRATED BY A MARKEDLY DECREASED DROPOUT RATE. FURTHERMORE, STUDENTS EXPOSED TO SUCH A PROGRAM DID NOT SEEM TO EVIDENCE THE INITIAL DROP IN GRADE-POINT AVERAGE AT THE TRANSFER INSTITUTION WHICH HAS BEEN CHARACTERISTIC OF THE TYPICAL JUNIOR COLLEGE TRANSFER. (HB)

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Cooperative Research Project No. OE-1549

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PROBLEM ON WHICH THE RESEARCH WAS FOCUSED

BACKGROUND

The success of enriched honor programs with superior students is well documented and need not be repeated here. However, there is virtually no evidence that the approach has been attempted with students of average or below average scholastic ability when compared with entering freshmen at four-year colleges and universities. Typically, these students, as described by Wakin, "were never culturally, socially, or economically deprived, but they may never have been listened to as thinking persons....have never taken themselves seriously in school and never expected anyone to be interested in their opinions on serious subjects." (1)

In September of 1961, Marymount College of Virginia embarked on an enriched basic liberal arts program for junior college students with low-to-average (middle range) scholastic aptitude. The program was undertaken because of the strong belief of the Marymount faculty that "average students may profit as greatly as superior students from an honors program" approach to higher education.

Specifically, the faculty of the college was interested in determining whether such a program could be an effective device for changing the attitude of this type of student toward her ability to achieve at least average academic success, her attitudes toward rigorous and independent study, and her appreciation for intellectual endeavor. However, the key question was: Would larger numbers of these students complete two years of college and then matriculate and succeed in four-year institutions of higher learning as a result of this experience? If this should be the case, then expanded programs of this type

could assist in the development of the manpower necessary to meet the nation's increasing demand for highly trained persons. Enriched programs designed to meet the needs of the average student would seem to be particularly applicable for junior colleges, now coming into their own as unique and vital instruments in American higher education, but which characteristically attract a student body which scores lower on standardized tests such as the CEEB and have relatively poorer high school academic scores. (2)

OBJECTIVES

The purpose of this study was to demonstrate one approach for the development of an enriched program for use in junior colleges and, secondarily, to evaluate its effectiveness over a two-year period.*

Because of the demonstration nature of the study it was not possible to satisfy all of the requirements of a rigorous experimental design. Nevertheless, the following hypotheses were formulated, which if found tenable, might be worthy of further investigation:

A. That scores on the Sequential Tests of Education Progress (STEP) in mathematics, science, social studies, reading, and writing from entrance to graduation would be significantly higher.

B. That the dropout rate would decrease.

C. That there would be greater incidence of transfer to four-year institutions of higher learning.

D. That performance at the four-year institution by transfer students would reflect increased competence in terms of higher grade point average.

E. That transfer students would show greater persistence at the four-year institution.

*This report follows an experimental group of students over a three-year period or through the junior year in college. It is the intention of Marymount College to continue the follow-up through their senior year.

RELATED RESEARCH

The enormous wasteage of human resources...time and energy, to say nothing of shattered hopes...which occurs as students enroll in college and for one reason or another, withdraw without completing the program, has been amply documented in Robert E. Iffert's study conducted for the Office of Education. (3) Though nearly 60 percent of the students in the study eventually graduated from some institution of higher education, fully 40 percent discontinued their college work. (4) Four-year church related institutions lost 29.3 percent of their entering class by the end of the first year (statistics for class of 1950).

Though the reasons for dropouts are varied, with plans for early marriage figuring primarily among women students who discontinue college attendance, 33 percent of the women respondents reported that they quit because they lacked interest in their studies; almost 23 percent reported that they were discouraged by low grades; and 16 percent of the dropouts were either dismissed or placed on probation for low grades. (5)

Another facet of the Iffert study which is meaningful in light of this project is student ratings of college facilities and services. Assistance from counselors and instructors in how-to-study techniques was included among the college facilities and services rated as most unsatisfactory. Opportunity for informal social contacts with faculty members, assistance from academic deans on problems related to course work and the degree of emphasis in college on intellectual and cultural pursuits outside of the classroom also received unfavorable ratings. (6)

The importance of individual contact in encouraging student endeavor is further underlined several times in a collection of papers prepared for a meeting sponsored by the Edgar Stern Family Fund and concerned with the problem of "increasing the value placed upon excellence of mind and spirit in this country." In this volume, M. H. Trytten points out that our country's demands for persons with high training have increased far more rapidly than our population and that we will have to concern ourselves with "salvaging as much of the trainable part of our population as possible, not only in the top five percent but farther down the scale as well." He continues by suggesting that:

> "Somewhere in the career of many people who are now outstanding there was a personality whose influence or whose personal efforts were important, if not indeed crucial, in the turning point of his career... there is too, the college teacher who may in fact be a rather mediocre teacher, but whose extraordinary interest in his student is somehow transmitted." (7)

James M. Mitchell of the Brookings Institution, writing in the same volume, suggests the need for much more research with regard to environment which aids or hinders growth, especially as this relates to the subject of identification of persons who foster excellence in others. (8)

An inventory of recently available research (in the same volume) by Adam Yarmolinsky describes an unpublished study by Heath, a psychologist who served as counselor at Princeton. He found that in general, his advisees, whom he retained throughout their college careers, demonstrated the "Classic Hawthorne Plant effect, responding to more-than-average attention with better-than-average performance." (9)

On the other hand, the literature contains many arguments which would restrict individualized instruction, especially of the type which is usually

called "Honors" to a special, high-ability level group. Chancellor E. W. Strong of the University of California in addressing an honors conference held at Oregon College of Education in Monmouth, Oregon on December 1, 1962, contended that honors programs should be for the best student rather than the merely good student. He states that:

> "...The zeal of some protagonists of honors is such that they want every good student to participate. But good is not best. Moderately talented is not highly gifted. I would say to those who want to do better for the good student to do so in the regular program of instruction. They will do the best for the best student by a special effort beyond this. The selectivity that is exercised in choice of students for an honors program is over-generous, however well meant, if it is not rigorous in limiting choice to students of highest ability and promise. Apart from participation in honors, these very best students can be expected to surpass good students in quality of work done...I am worried about dilution. I know that intentions are generous and creditable in seeking to extend honors opportunities from the peak of the excellence pyramid toward the base represented by passable students. Yet I think we should look first to rigorous selectivity and will serve the cause of honors best by being highly selective." (10)

The Superior Student tends to focus upon programs for the highly talented. However, in the March-April 1963 issue, the editor records a note of concern:

> "Thus, if we conclude our students are but average and treat them accordingly, we may find these students will accept this image and fail to realize potentialities which neither the tester nor the subject recognized. It may very well be true that most students will perform at a higher level when they are encouraged to do so. In any case, all those responsible for the selection of students for honors programs ought to be alerted to the necessity of looking for late bloomers." (11)

A search of the Educational Index and the Junior College Journal turned

Stockwell and Feldman, after classifying as "average" those students "who appear somewhat aimless in selection and vigor of pursuit of their collegiate level program" suggest that junior and senior high schools would do well to prepare average capable students for further education in college-level technician curriculums. (12)

"Operation Second Chance" details the philosophy and procedures devised at Bronx Community College to provide a "second chance" for a small group of 20 students who had sought but been denied admission to college.

The over-all recommendation of this limited study is a plea for more programs in which students receive the academic support and sympathetic guidance which they need, but with opportunity to enjoy this help while in full-time attendance at college. Other recommendations include investigation of the effectiveness of various teaching and learning devices, use of flexible time patterns and more concern with effectiveness of instruction and emphasis upon its development. (13)

Several insights regarding the "average" student can be gathered from a report by Dean K. Whitla presented at Swannanoa Conference, sponsored by the Southern College Personnel Association and the Southern Regional Education Board. The "average students" of concern here were Harvard students, so generalizations to other college populations would be suspect. However, Dean Whitla reports:

> "We could see clearly the detrimental effect of 'academic averageness' on those in the latter group in their reluctance and almost fear of approaching faculty and house staffs in a status that they felt was second rate. We could see that the average student, by not

being at either extreme of academic performance, could exist without drawing the attention of professors and staff, and therefore, if any initial apathy or aimlessness existed, he could easily avoid deep personal involvement in his work. This in turn can result in feelings that college life and post-college activities do not lead naturally one from another, and college becomes an isolated experience.

"On the other hand, when our academically average men overcame the psychological barriers of their averageness and made contact socially (in the house, or tutorial), with faculty members, came to know the faculty as men on the human level, and were guided into independent study, they obviously benefited much more from their education, conveyed more of the feeling that they had carried the tolerance and integrity of our system of values into their personal lives, and in turn, were those men who generally received the higher ratings. However, the average man's contact with the faculty seemed too much the result of accident. One might wish for a kind of invisible net that might be spread around all our students to draw them into the fellowship of scholars." (14)

PROCEDURE

A. Characteristics of the College and the Students:

Marymount College of Virginia is a Catholic, two-year college for women, accredited by the Southern Association. Approximately 80 percent of the student body originates from the Eastern Atlantic states (66 percent from the Northeast and 14 percent from the Southeast); the remaining 20 percent are from the Middlewest, with a few students from the far west, Puerto Rico, Panama, Latin America, the Philippines, and Cuba (refugees). The student body is overwhelmingly at least third generation American and come from upper middle-class homes. Over 60 percent of the fathers own their own business or are high-level business executives; another 20 percent are engaged in professional activities and 10 percent are government officials or military officers of the rank of Colonel and above.

At the time of this investigation, approximately one-fourth of the parents of students had graduated from a four-year college or university with five percent having completed graduate programs through the M.A., PhD., LL.D. An additional one-third of the parents had completed from one to three years of college. Less than five percent of the parents did not complete high school. Typically, homes of Marymount students as indicated by parents' economic level, professional and business attainments, and avocational interests, could be classed as upper-middle class.

The mean combined CEEB SAT score for entering freshmen in 1962 was 825 at the 20th percentile. Ten percent of the group graduated in the upper quartile of their high school class; 25 percent in the second quartile; 35 percent in the third quartile; and 30 percent in the lowest quartile.

B. The Enriched Liberal Arts Program:

The enriched program has been described in detail elsewhere and so will not be repeated here except in highlight form. (16) Briefly, an "honors" approach and seminar method constitute the heart of the program.

1. The honors approach, with emphasis upon independent study, varied intellectual stimulation and upon meeting rigorous faculty expectations, was considered to be a significant means of stimulating students to work to their capacity. It was designed to help students realize the satisfactions which come of real scholastic endeavor. Special emphasis was placed upon a climate of excellence on the campus. Faculty workshops were held twice yearly to reinforce faculty interest in creative teaching and to encourage new approaches to subject matter. An "honors room" with books reserved for the various seminars was set up in the library.

2. The "seminars", small groups of 12 to 15 students, provided the highly individualized mode of interchange between faculty and students and among students. Students were encouraged to wrestle with the ideas implicit in the subject matter, to subject their own ideas to the scrutiny of critical discussion and to begin to understand that educated opinion must be documented. Here the student who is likely to have had little confidence in her ability could test herself in a supportive setting.

The program is arranged to give the student:

(a) Training in logical thinking.

(b) Command of written English.

(c) Facility in oral expression; discussion of timely as well as intellectual topics.

(d) Familiarity with the social and natural sciences with an aim of affording greater understanding of fellow human beings in other parts of the world as well as other classes of society.

(e) Theological and philosophical values consistent with adult responsibilities.

(f) Command of a foreign language.

The language, experimental science and mathematics courses, were each enriched with laboratory periods. The language laboratory is equipped with modern tape-recorders and perfecting of each tape is an integral part of the student's language work. Emphasis in the science laboratory was upon understanding and relating of concepts rather than a survey of facts. Mathematics lab was devoted to principles of problem solving, again with emphasis on concepts involved rather than procedure.

Peripheral, but important to the entire program, were the opportunities for remedial work. There is a developmental reading program, using both the controlled reader and Tachistascope methods, as well as the SRA Reading Program for improving rate and comprehension. A Study Habit clinic was maintained. Close contact between each student and her faculty advisor enabled guidance over trouble spots.

C. Investigation Procedures:

A sample of 40 students who graduated from the liberal arts curriculum and who participated in the enriched program during 1961 and 1962 and graduated in June 1963 (hereafter referred to as the experimental group) was matched on the basis of CEEB scores and high school record with a like number drawn from the graduates of 1960-1961 who had not experienced the enrichment program (hereafter referred to as the control group).

The mean total CEEB score for the experimental group was 830.17.

The mean total CEEB score for the control group was 821.50.

No significant difference exists between these means as determined by a "t" test.

With regard to high school rank, five in the experimental group were in the first quartile, eight were in the second, 15 in the third, and 12 in the fourth.

For the control group, six were in the first quartile, ten were in the second, 11 were in the third, and 11 ranked in the fourth.

Chi-square was used to test the hypothesis of independence with regard to high school rank between the two groups. No significant difference was established. Thus it can be suggested that the two groups compare closely with regard to ability level and scholastic performance.

Criterion:

Variables were:

1. Change in Sequential Tests of Educational Programs (STEP) test scores from entrance to graduation in mathematics, science, reading, social studies and writing.

2. Dropout rate.

3. Incidence of transfer to four-year institutions of higher learning.

4. Performance at the four-year institution.

5. Junior year persistence at the transfer institution.

The statistical techniques employed were generally analysis of covariance, Chi-square, and "t" test. Assumptions for these tests were satisfied before their utilization.

RESULTS

Tables I to III indicate that there were no significant differences between the two groups on the adjusted post mean of STEP mathematics, science, and reading. However, Table IV indicates the experimental group performed significantly better (.05 level) in social studies than the control group.

Conversely, the control group exceeded the experimental group on STEP writing at the same level of confidence (.05).

TABLE I

ANALYSIS OF COVARIANCE FOR STEP MATH

COMPONENTS OF VARIABILITY		SS	DF	MEAN S	F
Treatment	(d)	38.76	1	38.76	.211
Error	(ew)	14109.66	77	183.24	
Total	(et)	14148.42	78		

2.05 with 1 and 77 degrees of freedom = 3.98

We accept null hypothesis

TABLE II

ANALYSIS FOR COVARIANCE FOR STEP SCIENCE

COMPONENTS OF VARIABILITY		SS	DF	MEAN S	F
Treatment	(d)	.09	1	.09	.001
Error	(ew)	6785.30	77	88.12	
Total	(et)	6785.39	78		

2.05 with 1 and 77 degrees of freedom = 3.98

We accept null hypothesis

TABLE III

ANALYSIS OF COVARIANCE FOR STEP READING

COMPONENTS OF VARIABILITY		SS	DF	MEAN S	F
Treatment	(d)	.09	1	.09	.0005
Error	(ew)	13872.60	76	182.53	
Total	(et)	13872.69	77		

2.05 with 1 and 76 degrees of freedom = 3.98

We accept null hypothesis

TABLE IV

ANALYSIS OF COVARIANCE FOR STEP SOCIAL STUDIES

COMPONENTS OF VARIABILITY		SS	DF	MEAN S	F
Treatment	(d)	234.33	1	234.33	6.18
Error	(ew)	2844.48	75	37.92	
Total	(et)	3078.81	76		

2.05 with 1 and 75 degrees of freedom = 3.98

We reject null hypothesis

Adjusted means: 290.63 = Experimental
288.41 = Control

Since the experimental and control groups were by definition graduates, it was necessary to resort to the parent populations to compare attrition rates. Analysis of dropout rates is therefore based on the entire liberal arts curriculum enrollment for the years under consideration.

Seventy percent of those enrolled in the liberal arts curriculum in the class from which the experimental group was drawn, persisted to graduation. This is significantly higher (X^2 = 7.97, sig. .01 level) than the 50 percent of liberal arts enrollees from the control group classes who persisted to graduation at Marymount. The difference proved statistically significant at the .01 level.

Twenty-three of the experimental group and 24 of the control group transferred to a four-year institution, thus no difference could be demonstrated with regard to the number transferring from either group. Neither

could differences be demonstrated with regard to the type of transfer institution in terms of its control (public versus private) or its size.

Although grade point average after transfer is not statistically different for the two groups, it is interesting to note that the grade point average of the control group declined from a mean of 2.36 at the end of two years at Marymount to a mean of 2.14 at the end of their junior year at the transfer institution (sig. .01 level). The experimental group experienced no such decline (Marymount grade point average = 2.20. Grade point average at transfer institution = 2.18.

With regard to persistence at the transfer institution through the junior year, no differences could be demonstrated.

Limitations Of Study:

1. The fact that the experimental and control groups differed not only in experiences but are also separated by time; i.e., five years lapsed between 1959 and 1963 with attendant changes in educational expectations, faculty, student population numbers, etc.

2. Lack of additional criterion measures such as student attitude data, teacher attitude data, critical thinking inventories, etc.

3. The small amount of time which has lapsed since the 1963 group left Marymount enabling follow-up for purposes of this study only through the junior transfer year.

In attending to these limitations the investigators will continue to follow these students in their careers and will seek additional evaluative data.

CONCLUSIONS

The purpose of this study was to evaluate the enriched program at Marymount College. It can be concluded from this study that such a program might be credited with increased student persistence as demonstrated by a markedly decreased dropout rate. Furthermore, students exposed to such a program do not seem to evidence the initial drop in grade point average at the transfer institution which is characteristic of the typical junior college transfer. (15)

It must be noted that findings with regard to academic achievement as measured by standardized tests were inconclusive. Nor did larger number of students participating in this program matriculate to four-year institutions.

Nevertheless, a significantly larger proportion of students who participated in this enriched program did persist to graduate from Marymount. Furthermore, the grades of these students at the end of their junior year in the transfer institution was remarkably consistent with their grade point average at Marymount. Students not exposed to the enriched program, on the other hand, experienced a marked drop in grade point average during this same period, possibly accompanied by the mental stress typical of such a decline. Thus the value of this or similar intensive, enriched programs for average or below average students seems to be somewhat supported.

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APPENDIX A

STEP - MATHEMATICS

Experimental		Control	
Pre	Post	Pre	Post
282	267	272	242
258	262	270	281
258	242	278	230
267	272	258	258
284	272	265	262
276	291	265	272
276	275	280	272
288	288	265	279
265	283	282	281
265	283	274	297
274	267	262	285
282	265	285	278
278	265	267	274
272	279	265	285
278	267	283	276
265	265	274	279
282	262	277	272
274	287	270	270
274	267	267	278
282	282	243	277
270	281	272	278
274	283	275	252
278	265	274	287
280	275	274	281
265	265	278	270
274	272	272	281
294	289	270	251
292	285	280	258
276	272	276	293
272	267	277	280
280	281	270	280
267	230	282	275
274	279	276	279
276	281	278	277
270	230	274	267
280	275	280	270
265	279	274	267
267	270	279	284
284	289	274	272
280	279	297	289

APPENDIX B

STEP - SCIENCE

Experimental		Control	
Pre	Post	Pre	Post
267	276	263	254
271	265	277	284
286	276	273	271
255	267	279	265
271	273	273	254
279	281	273	269
271	273	280	281
284	291	282	293
277	267	271	269
277	259	280	286
275	265	258	279
287	284	279	287
282	287	263	277
267	275	273	254
277	284	279	273
255	269	273	284
277	278	296	267
273	286	255	259
277	287	278	287
265	265	287	271
280	281	278	291
277	265	275	275
280	279	273	287
293	279	291	279
265	254	279	267
279	269	284	283
287	275	279	269
265	283	263	273
287	296	293	300
279	281	293	271
280	275	283	280
280	263	280	275
275	269	277	275
275	281	291	302
265	271	275	283
269	275	267	261
273	279	279	275
287	275	265	279
275	275	282	211
295	287	295	284

APPENDIX C

STEP - READING

Experimental		Control	
Pre	Post	Pre	Post
290	290	297	294
294	308	298	293
293	300	309	288
294	298	297	289
293	269	301	297
312	307	293	295
294	294	312	314
294	303	327	317
301	253	300	307
300	311	312	320
307	309	293	294
319	329	297	302
301	315	307	301
290	303	289	304
327	322	324	322
289	290	298	307
307	311	314	307
309	309	293	255
330	305	322	322
		295	294
309	317	322	312
294	304	295	290
317	305	293	293
293	320	319	322
284	279	289	290
298	294	303	300
317	320	305	340
300	308	289	295
329	322	315	320
298	305	319	307
303	312	314	312
301	290	305	308
295	308	294	298
305	324	314	311
292	292	281	294
310	292	287	304
305	314	315	332
300	303	311	292
278	297	298	311
298	255	320	305

APPENDIX D

STEP - SOCIAL STUDIES

Experimental		Control	
Pre	Post	Pre	Post
286	267	286	290
297	297	289	275
286	273	286	291
279	273	288	293
296	278	289	273
301	305	286	269
292	284	292	295
296	303	286	284
273	288	298	290
292	293	296	295
276	296	262	287
298	314	293	287
308	288	276	292
282	278	279	269
314	309	315	300
295	292	296	276
296	296	297	293
		291	281
301	312	312	300
		284	284
291	290	298	295
283	284	271	268
299	308	282	295
288	288	295	278
276	284	269	267
295	278	280	301
299	300	298	295
291	288	264	275
295	308	303	301
282	296	300	304
287	291	292	303
286	290	293	303
289	293	274	288
297	305	298	300
282	278	268	271
289	288	293	259
313	300	300	298
299	288	284	283
282	296	279	288
289	287	294	305

APPENDIX E

STEP - WRITING

Experimental		Control	
Pre	Post	Pre	Post
278	258	299	282
303	311	294	298
296	305	317	296
290	290	292	300
296	251	301	285
301	305	296	300
296	298	308	307
294	303	301	309
284	294	306	289
310	300	301	317
315	258	284	296
306	305	309	290
315	250	311	288
276	254	292	287
315	313	313	288
303	309	296	309
294	300	305	306
		306	313
299	287	305	301
		284	294
303	269	296	292
294	307	307	294
306	262	278	292
290	258	292	322
268	287	276	278
296	250	276	285
308	303	320	315
299	287	286	290
301	305	299	315
299	258	313	301
308	294	309	296
282	294	292	307
301	305	294	309
301	309	306	303
278	305	288	294
292	313	286	290
292	315	310	311
303	307	294	290
280	303	284	307
280	296	315	303

APPENDIX F

GRADE POINT AVERAGE

Experimental		Control	
1st Semester	4th Semester	1st Semester	4th Semester
1.83	1.81	1.94	2.12
2.54	2.42	2.06	2.22
2.32	2.17	2.53	3.31
		1.70	2.50
2.06	2.15	2.20	2.32
1.97	2.03	1.89	2.24
2.42	2.32	2.97	2.71
2.19	2.25	3.52	3.80
1.82	1.98	2.12	2.24
2.44	2.45	2.47	3.00
2.58	2.70	1.87	2.17
2.00	2.21	2.23	2.00
3.14	3.04	2.38	2.37
1.72	1.83	1.62	2.14
2.36	2.32	3.04	2.34
2.14	1.82	2.03	2.63
2.33	2.09	2.59	2.22
2.25	2.47	1.82	1.94
2.03	2.04	1.79	2.50
1.81	1.92	1.67	2.21
2.14	2.18	2.09	1.33
2.06	2.30	2.75	2.53
2.56	2.83	2.00	2.28
2.61	2.79	1.97	2.74
2.19	2.29	1.77	1.92
2.22	2.23	1.85	2.20
2.18	2.18	2.06	2.40
2.17	2.19	1.91	1.92
2.86	2.96	3.05	3.65
2.85	2.61	2.32	3.06
2.22	2.30	2.34	2.28
2.33	2.16	1.73	2.19
1.92	2.08	2.36	3.00
2.31	2.28	2.52	3.14
2.00	1.85	1.76	2.11
2.31	2.32	2.38	2.71
1.97	2.07	2.23	2.76
2.00	2.11	2.82	2.00
1.97	2.11	1.70	2.50
2.64	2.65	2.67	3.35

APPENDIX G

GRADE POINT AVERAGES AT MARYMOUNT AND DURING FIRST TWO SEMESTERS AFTER TRANSFER TO FOUR- YEAR INSTITUTIONS FOR THE CONTROL GROUP

X = 2.36 GPA Marymount	X = 2.07 GPA Transfer 1st Semester	X = 2.14 GPA Transfer 2nd Semester
2.68	2.44	2.50
2.26	2.00	2.28
2.14	1.18	2.28
2.54	2.36	2.87
2.84	1.68	
2.92	1.84	1.90
2.11	1.53	1.76
1.91	1.23	2.12
2.14	2.40	2.16
2.18	2.33	1.25
2.49	2.67	2.00
2.03	1.82	
3.66	3.00	2.84
2.10	2.81	
2.31	2.30	2.30
2.40	2.68	2.50
2.69	1.80	2.41
2.19	1.40	1.60
2.14	1.13	2.40
2.23	2.65	3.10
1.71	2.60	1.20
2.69	3.70	2.56

APPENDIX H

GRADE POINT AVERAGES AT MARYMOUNT AND DURING FIRST TWO SEMESTERS AFTER TRANSFER TO FOUR-YEAR INSTITUTIONS FOR THE EXPERIMENTAL GROUP

X = 2.20 GPA Marymount	X = 2.18 GPA Transfer 1st Semester	X = 2.31 GPA Transfer 2nd Semester
2.11	2.33	2.00
1.77	2.09	2.30
2.22	1.77	2.53
2.34	2.40	2.50
1.82	2.06	2.23
2.91	2.50	2.60
2.70	3.20	3.00
2.22	2.20	1.20
2.04	1.87	2.61
2.32	.67	2.33
1.87	1.97	2.58
2.26	1.80	2.18
2.18	1.87	2.50
2.24	2.86	2.89
1.92	2.06	2.00
2.00	2.31	2.68
2.36	1.88	2.29
2.48	2.52	2.47
2.16	2.05	2.00
2.70	2.47	2.20
2.24	2.66	1.50
1.59	2.50	